

Lederberg

December 27, 1953

Dear Carl:

First of all, best wishes for the new year to Gerry and yourself!

In connection with a few months' visit here by Sidney Rubbo (Melbourne) we would like to dabble in a few experiments in yeast genetics, primarily to familiarize ourselves with the material rather than with any hope of specific accomplishments. Some time in the future, however, I might like to do some work on the sexual function by way of comparison with *E. coli*. Meanwhile, we are trying to see whether we can get a differential inactivation of nucleus and cytoplasm in crosses involving petites. Do you know of any work, either your own or anyone else's, on the possibility of treating haploid cells with UV or the like so as to sterilize them in respect to vegetative reproduction without impairing their ability to copulate?

Could you help us out with a few cultures? I have a pair of a and ai from Pomber, which is probably inherited ultimately from you. However, the ai strain (numbered "63") grows in a terribly flocculent habit, and none too well at that. In addition, I have not yet been able to demonstrate prototroph formation from the two auxotrophs he sent too, and his strains may well have lost their sexual vigor. I would be very much obliged to you if we could have at least the two mating type haploid cultures from *S. cerevisiae*, if possible isolates with a dispersed habit in liquid medium. [And without gene converters if possible!]. We propose to make some of our own auxotroph mutants, and will of course be very happy to return these for your own purposes. If you have a few in each mating type already that serve as good clearcut markers for the selection of prototrophic diploids, so much the better, as we will be able to get started sooner, but Rubbo will want the experience of hunting the mutants in any event.

Since Rubbo's time here is rather limited, the favor of an early reply would be especially appreciated.

Yours, as ever

Joshua Lederberg